



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,981	07/10/2002	Hendrick Kornelis	DN1999223USA	4090

7590 07/07/2004

Richard B. O' Planick
Department 823 The Goodyear Tire & Rubber Company
1144 East Market Street
Akron, OH 44316-0001

EXAMINER

FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,981

Applicant(s)

KORNELIS ET AL.

Examiner

Justin R Fischer

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04032002
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As currently drafted, claim 1 contains the following language: "the knurls on the tire have a location and a pitch complimentary to the knurls (on the rim) specified by applicable rim standards for the tire's size such that the knurls on the tire, when mounted on the design rim, interlock with the knurls on the design rim". On its face, the language appears to suggest that a standard exists between the rim type and the location/pitch of the knurl arrangement. However, it is unclear exactly what this standard is and the ERTRO Standards Manual supplied by applicant does not provide a clear relationship between a rim type and knurl arrangement. Furthermore, the above noted language appears to suggest that the arrangement is satisfied if the knurls on the tire interlock with the knurls on the rim and as such, this definition will be used for examination purposes. Applicant is asked to clarify any relationship between the rim type and knurl arrangement without the introduction of new matter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1733

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by McClevey (US 1,396,515). As best depicted in Figures 3 and 6, McClevey discloses a pneumatic tire construction in which the rim and tire are provided with a plurality of knurls or protrusions, such that the tire and rim interlock or engage one another upon mounting (Page 1, Lines 70-90). It is clear from Figure 3 that the knurls are located along the bead base, the radially inner flange contacting surface, and the radially outer flange contacting surface. As to the language "the knurls on the tire have a location and a pitch complimentary to the knurls (on the rim) specified by applicable rim standards for the tire's size", the tire of McClevey is seen to constitute such a construction in that McClevey expressly states that "the ridges of one registering with the grooves of the other" (Page 1, Lines 85-90)- thus, the tire and rim are formed as an interlocking assembly. As noted in the 112, 2nd Paragraph rejection above, it is unclear if such language is suggesting that a standard exists between the rim type and the location/pitch of a knurl arrangement (the ETRTO Standards Manual supplied by applicant does not clearly set forth such a standard).

As to claim 3, it is clear from Figures 1 and 3 that the knurls have a length along the entire extent of the respective bead bases. Additionally, it is suggested that the language "length of bead base" be incorporated in the claim to clearly define the abbreviation L_B in an analogous manner to the description of the knurl length (claim properly recites "the knurls on the bead base have a length L_K ").

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda (JP 03169727). As best depicted in Figures 2-4, Ikeda teaches a pneumatic tire construction in which the entire rim contacting surface of the tire is provided with a plurality of knurls or protrusions. While the rim of Ikeda is not similarly formed with a plurality of knurls, it is emphasized that the claim is directed to a pneumatic tire, not a wheel assembly comprising a tire and a rim. The claim only requires that the tire is formed with a plurality of knurls and clearly, the tire is capable of forming an interlocking assembly if it were mounted on a rim having a complimentary arrangement of knurls.

Regarding claim 2, Figure 4 of Ikeda depicts a plurality of triangular knurls or protrusions.

As to claim 3, Figure 3 depicts the knurls as being disposed along the entire extent of the bead base.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McClevey and further in view of Ikeda, Udall (US 4,209,051), and Hino (JP 05139106). As previously stated, McClevey discloses a pneumatic tire construction having a plurality of complimentary knurls in the tire and the rim. In particular, McClevey describes the knurls as "a series of ridges and grooves, or corrugations" (Page 1, Lines 75-85). While

Art Unit: 1733

the knurls of McClevey are not expressly depicted or described as being triangular, one of ordinary skill in the art at the time of the invention would have found it obvious to form them with such a geometry since the language of McClevey broadly suggests the inclusion of corrugations and triangular arrangements are well known and extensively used in similar tire assemblies. For example, Ikeda (Figure 3), Udall (Figure 6), and Hino (Figure 8) each disclose the use of a triangular design at the tire/rim interface. It is emphasized that the critical issue of McClevey is not the specific geometry of the knurls but rather the inclusion of the knurls in the tire and the rim to define an interlocking assembly. It would have been within the purview of one of ordinary skill in the art at the time of the invention to select a triangular orientation for the knurl assembly of McClevey, especially in view of the fact that such orientations are consistent with similar tire constructions.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin Fischer

June 29, 2004



BLAINE COPENHEAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700